

Chapman 4

NEURO-DYNAMIC MEDICINE:

MEDICAL OPINIONS,

Chiefly from the Medical Press,

CONCERNING ITS

GENERAL PRINCIPLES;

ALSO CONCERNING

DR. CHAPMAN'S WORKS

IN WHICH THOSE PRINCIPLES ARE PRACTICALLY EXEMPLIFIED, VIZ.,

Neuralgia, and Kindred Diseases of the Nervous System: their Nature, Causes, and Treatment; also a Series of Cases, preceded by an Analytical Exposition of them, exemplifying the Principles and Practice of Neuro-Dynamic Medicine. By JOHN CHAPMAN, M.D., M.R.C.P., M.R.C.S. 8vo, cloth, 14s. London: J. & A. Churchill, 1873. [See page 8.]

Functional Diseases of Women: Cases Illustrative of a New Method of treating them through the agency of the Nervous System, by means of cold and heat. Also, an APPENDIX, containing Cases Illustrative of a New Method of treating Epilepsy, Infantile Convulsions, Paralysis, and Diabetes. 8vo, price 2s. 6d. [See page 11.]

Sea-Sickness, and how to prevent it: an Explanation of its Nature and successful Treatment, through the Agency of the Nervous System, by means of the Spinal Ice-bag. With an Introduction on the General Principles of Neuro-Therapeutics. 8vo, cloth, 3s. London: Trübner & Co., 1868. [See page 13.]

Diarrhœa and Cholera: their Nature, Origin, and Treatment through the Agency of the Nervous System. 8vo, cloth, 7s. 6d. London: Trübner & Co., 1866. [See page 15.]

Cases of Diarrhœa and Cholera treated successfully through the Agency of the Nervous System chiefly by means of the Spinal Ice-bag. 8vo, 1s. 6d. London: Baillière, Tindall & Cox, 1871. [See page 19.]

A Series of Cases, preceded by an Analytical Exposition of them, exemplifying the Principles and Practice of Neuro-Dynamic Medicine. 8vo, cloth, 5s. London: J. & A. Churchill, 1873.



PRELIMINARY OBJECTION

TO

NEURO-DYNAMIC MEDICINE.

"A great preliminary objection to Dr. Chapman's therapeutical method consists in the reluctance which patients, when they hear of it for the first time, very naturally feel to be treated by the application of ice along the spine. In order to overcome this feeling by showing its groundlessness, he presents a considerable amount of evidence that the effects of the spinal ice-bag, when it is applied in suitable cases, are actually soothing and agreeable. Incredible as the proposition may seem at first sight, we are constrained to admit that it is conclusively established. He says: 'I have presented a considerable body of evidence, proving that the spinal ice-bag, when rightly applied, possesses in a remarkable degree the power of producing sleep; and every one knows that as a general rule the operation of causes producing sleep is far from unpleasant. I suppose, therefore, that my readers will experience no difficulty in recognising that when the spinal ice-bag produces sleep, the process by which it does so must involve the exercise of a soothing and comforting influence.'

"With reference to the sensations produced by the spinal ice-bag, my readers must bear in mind that it is designed not for the healthy but the sick, and only for that portion of the sick in whom has become established precisely that morbid condition of the circulation of the blood in the nervous centres which the application of cold is of all agents the most capable of subduing. Hence, in these cases, and in these only, inasmuch as the spinal ice-bag subdues a morbid condition in the very citadels of life, a condition in which the phenomena of the disease in question originate, and inasmuch as the cold restores the circulation of the blood in those nervous centres to its normal state without contaminating or embarrassing the system with medicines, it seems, *à priori*, that such physiological changes must inevitably be accompanied with sensations of comfort and pleasure, as experience proves them to be.'

"Dr. Chapman confirms this statement by citing the testimony of a considerable number of patients who have been treated by ice in cases of sickness, diarrhoea, neuralgia, and various other disorders, and certainly there can be no mistaking the language of the patients themselves written down from their own lips. The following expressions are samples of the kind of testimony given by a large number of patients:—'The ice is beautiful; I don't think I shall ever be able to do without it—it is so comforting.' 'I find the ice very agreeable; I look for it, and would like to have it on longer each time.' 'I go to sleep with the ice on; it's astonishing how pleasant it is.' In a report of a case of diarrhoea treated successfully by ice to the spine, the director of an Hydropathic establishment remarks: 'One thing has much struck me, viz., the liking that sensitive chilly patients have for the cold bag to the spine, although frightened to think of it before they make a trial;' and Dr. Druitt, who, it appears, examined several patients treated by Dr. Chapman, says: 'I learned from all the patients that the treatment had made them more comfortable—I mean as regards their general feelings of health and animal sensations, without reference to the relief of particular symptoms.' We may add that in 40 out of one hundred cases given in this volume* the records of them prove that instead of inducing a feeling of coldness, the use of the spinal ice-bag so improved the circulation as to cause patients who had habitually suffered from that feeling to become permanently warm."—*The Doctor*, April 1, 1873.

* "Neuralgia and Kindred Diseases of the Nervous System."

MEDICAL OPINIONS

CONCERNING

THE GENERAL PRINCIPLES

OF

NEURO-DYNAMIC MEDICINE.

From the Lancet, Feb. 20, 1864.

"Carrying on his experiments, Dr. Chapman erects into a therapeutical system the application of cold and heat to the spine, in various parts, and for different periods of time, and claims for this treatment a philosophical interpretation and wide practice. His brochure (on the "Functional Diseases of Women") requires reading and testing clinically. It is original in its views."

From the Medical Times and Gazette, Jan. 23, 1864.

"Dr Chapman expresses his belief that many maladies not usually held to depend on nervous agency really originate in that manner. . . . The subject deserves the serious attention of the profession, not only from the high character of the originator, but also from the amount of evidence which he has already brought to bear upon it."

From the Medical Times and Gazette, June 14, 1873.

"Dr. Chapman aims at something far more than a clinical generalization. . . . He would tell us of the immediate agency by which each and all of these disorders (of the nervous system) is caused, and, knowing this, he would give us a key to the direct treatment of them all. He does not shrink from saying that here we have a key to disorderly actions of muscles voluntary and involuntary, to morbid actions of glands, to disorders of local nutrition, &c.; that his method is a method of commanding a vast number of very various maladies. Indeed, although no vital function depends primarily and in its simplest terms upon the nervous system, yet in man this system has gained so great a control over all actions in the economy, that to command this system is practically to command the whole body. Dr. Chapman's system is therefore something like a panacea, and he asks to have it regarded in that light, and to have it called the doctrine of 'neuro-dynamic medicine.'"

"Dr. Chapman himself, however, speaks not as a mere theorist. He publishes in adequate detail a very large number of important cases, which together make up a large mass of evidence in favour of his views—evidence which cannot be disregarded. . . . These numerous examples cannot be without great weight; many of them, indeed, are very striking. . . . It is evident that if Dr. Chapman establishes any great part of his thesis, he has made one of the most remarkable therapeutical discoveries in the history of the art."

From the Medical Press and Circular, June 5, 1867.

"We are not accustomed to devote our leading columns to the advocacy of any therapeutical system, but we feel it only due to a most able physiologist to testify to the necessity of submitting his conclusions to the test of experience. . . . Reasoning on the facts that had been demonstrated by Claude Bernard and Brown-Séquard, that a division of a portion of the sympathetic increases the flow of blood to the parts to which its branches are distributed, while galvanism of the nerve decreases the amount of blood in the same

parts, Dr. Chapman directed his inquiries to the possibility of finding remedial agents that would depress or excite the nervous centres. Such a depressant, he concluded, might be found in *cold*, while the opposite condition of *heat* should, *a priori*, act in a manner analogous to galvanism. He put his conclusions to the test by applying heat and cold to the spine, and so satisfied is he with the result, that he has not ceased to urge upon the Profession his belief that, by varying the temperature of the nervous centres, we may, at will, diminish or increase the vital activity of those parts which derive their nerve supply from the portions on which we experiment."

From the Medical Press and Circular, April 30, 1873.

"It is, indeed, quite time that the remarkable generalization long since arrived at by Dr. Chapman, and now supported by the vast array of facts and arguments before us, should receive the thoughtful consideration of all those engaged in the treatment of disease. His theory not only explains many morbid phenomena, but suggests a rational mode of treating the diseases on which they depend. This mode has been applied in hundreds of cases with such success that Dr. Chapman is entitled to ask his brethren either to try it in their own practice, or to state their reasons for not doing so, and we venture to assert that those who carefully read this volume (his work on Neuralgia), will hesitate before they measure swords with the author."

From the Medical Mirror, February, 1867.

"In face of the evidence adduced by Dr. Chapman it certainly seems difficult to avoid the conclusion that at any rate a very large proportion of the diseases manifesting themselves in the different viscera, and named according to the structures in which they appear—as, for example, diseases of the lungs, bowels, bladder, or womb—are really diseases of the nervous centres presiding over these different organs, and that those diseases can really be influenced curatively by cold or heat applied along the appropriate part of the spine. . . . Assuming the reality of the facts themselves, and we see no alternative, the conclusion seems to us unavoidable, that the pathological and therapeutical doctrines which Dr. Chapman has originated and extensively exemplified, must effect a great revolution in the principles and practice of medicine—a revolution affording peculiar satisfaction to every philosophical physician, as it is exclusively in the direction of positive science."

From the Doctor, April 1, 1873.

"Dr. Chapman has expounded a theory that every practitioner ought carefully to weigh, and has enforced his doctrines with a mass of evidence that entitles him to a foremost place among those accurate clinical observers who are helping to advance scientific therapeutics."

From Professor F. W. BENEKE, one of the Editors of the "Archiv des Vereins für wissenschaftliche Heilkunde."

"It seems to me that Dr. Chapman has done an important service in calling attention afresh to the intimate connexion between many morbid phenomena, and morbid conditions of the centres of the nervous system, and to the immediate dependence of the former on the latter—especially on morbid conditions of the ganglia of the sympathetic. . . . Should the efficacy of his therapeutical measures be verified, even to a small extent only, the knowledge of his general view will conduce to fruitful meditation, and even an only partial confirmation of his therapeutical experiences would be already an extraordinary gain to our power of healing."

In a letter addressed to Dr. Chapman, Professor Beneke writes,—*"I think that much can and will be done by the principle of applying cold and heat to the spine, which you have introduced; as far as the heat is concerned, I am fully convinced of its extreme usefulness in certain cases;"* and again he says,—*"I take always the greatest interest in the very important mode of treatment of certain diseases, which we are owing to you."*

From a Paper read to the Surgical Society of Ireland, March 13, 1868, by Dr. J. H. BENSON, Physician to the City of Dublin Hospital.

"This grand object—a new therapeutical agent in our hands by which to control disease—seems to have been accomplished in a very simple way by Dr. Chapman, and by the use of heat or cold to the spine, a great number of diseases seem capable of being successfully treated. This power, moreover, extends not only to nervous diseases; universally so called, but also to many of those which, previous to his discovery, were never considered to have had any causal relation to a deranged state of the nervous

centres. Such for example are bronchitis, diarrhoea, constipation, leucorrhœa, and the usual disorders of menstruation, some skin diseases, and many others.

"Whether this therapeutic agent then is a powerful one or not is to be determined by experiment; and I think that those who give it a fair trial will agree that it is, whatever be their opinion of the soundness of the theories which are involved respecting it. In several cases of disease I have used this agent, but generally in conjunction with others, and, therefore, though satisfied in my own mind of its influence for good in those cases, I did not report them, for in order that the remedial value of any given general mode of treatment should be fairly tested, it is obviously desirable that the treatment should be used alone. In two cases, however (one of paralysis and one of suppression of the menses), cold to the spine was used successfully, unassisted by any other agent whatever."

From C. H. F. ROUTH, Esq., M.D., Consulting Physician for Diseases of Women to the North London Consumption Hospital, and Physician to the Samaritan Hospital.

"Dr. Routh said [at a meeting of the Medical Society of London] he had been to some extent a pupil of Dr. Chapman, and had witnessed his treatment of certain cases at the Samaritan Hospital. The result was the production of certainty in his mind of the truth of Dr. Chapman's doctrine—viz., that the circulation and nutrition of remote parts, or of the periphery of the body, may be increased by the application of heat to the same region; also, that the functional activity of the spinal cord may be depressed or exalted in the same way. These facts, he repeated emphatically, are thoroughly established and indisputable. Being so, they opened up the prospect of a great therapeutical revolution."

From a Letter to Dr. CHAPMAN by Dr. BREBETON, of Sydney, New South Wales.

"I have fully satisfied myself of the great value of your discovery—a discovery not of a few isolated facts, but of a *principle* of treatment, capable of most varied application, and like all principles, likely to lead to further, and as yet unimagined, results."

From a Letter to Dr. CHAPMAN by Dr. HAYLE, of Rochdale.

"I take this opportunity of thanking you for a very effective additional means of combating disease. Your discovery opens up a wide field of speculation as to the primitive and secondary action of medicines."

From a Letter to Dr. CHAPMAN by Dr. JOSEPH M. O'FERRALL, late Senior Physician of St. Vincent's Hospital, Dublin.

After stating that he had found the spinal ice-bag "very efficient in many cases painful spasmodic affections seeming to depend on irritation of some portion of the spinal cord," he observes: "The details of these cases are certainly calculated to support your views of the therapeutic effect of the agent in question."

[Each of the three immediately following extracts is from a Letter written when Dr. Chapman was a candidate for a certain Professional appointment:—]

From W. B. CARPENTER, Esq., M.D., F.R.S., Registrar of the University of London; Author of "Principles of Physiology, General and Comparative," and "Principles of Human Physiology," &c. &c.

"I regard Dr. Chapman's medical researches as of the highest physiological interest and therapeutic value."

From R. H. GOOLDEN, Esq., M.D. Oxon., F.R.C.P., Physician to St. Thomas's Hospital.

"I take this opportunity of acknowledging the advantage I have derived, in hospital as well as in private practice, from facts in pathology and therapeutics which the Profession owes to Dr. Chapman's labour and acumen, and the correctness of which he did me the honour to demonstrate practically in my wards at the hospital."

From ERNEST HART, Esq., M.R.C.S., Ophthalmic Surgeon and Lecturer, St. Mary's Hospital, and Editor of the British Medical Journal.

"Dr. Chapman's highly interesting researches on the application of cold and heat to the spine as a curative method, and on the physiological effects of those agents, are very valuable, and probably admit of greater development than they have yet attained, when the limits of the therapeutic application are clearly defined. I have myself, carrying out Dr. Chapman's plan of treatment, met with success in a very intractable form of disease, and the Profession is indebted to him for a valuable contribution to the healing art."

From W. H. SANDHAM, M.R.C.S. Eng. (published in the Medical Press and Circular, Dec. 16, 1868).

In his report of a "Case of Melancholia treated by Ice to the Spine," Mr. Sandham says:—"After having read the report of three cases of delirium tremens of a severe character cured by ice to the spine, and having myself had satisfactory results from ice applications in a case of epilepsy, I determined on trying ice in the present case, as directed by Chapman, to whom be all the honour he so well deserves. My patient was in a low state, unconscious, his eyes fixed and vacant, frightening myself and his family, as I feared a fatal termination before morning." Mr. S. then gives the details of his treatment with the spinal ice-bag, and having stated that the patient "is very nearly mentally and bodily as well as ever," adds—"So far the treatment by ice with a view to procure sleep was a complete success, proving the ice application recommended by Chapman to be an invaluable therapeutic agent. . . . The value of cold to the spine cannot be overestimated."

Abstract, published in the British Medical Journal, Dec. 12, 1868, of a Paper entitled "The Therapeutic Application of Heat and Cold,"

Read at the Medical Society of the College of Physicians of Ireland, Nov. 25, 1868, by Dr. D. B. HEWITT, L.K.Q.C.P., Physician to the City of Dublin Hospital.

"After a short preliminary historical notice of the effects attributed to heat and cold as therapeutic agents, Dr. Hewitt proceeded to say that his chief object in bringing the matter under the notice of the Society, was to elicit the experience of any member who might have tried the method recommended by Dr. John Chapman of London. He did not think that a sufficient number of cases had as yet been adduced to furnish matter for an induction so extensive as to be probably true; but the facts as observed by him were quite in accordance with those detailed by Dr. Chapman. He had not seen any thermometrical observations respecting the effect of heat and cold to the spine, with the exception of those which he had brought under the notice of the Society last year. He then detailed several cases in which the use of those agents had been remarkably successful; and a few cases in which they failed to do good. Among the former, he enumerated a case of amenorrhœa, with very violent cephalalgia and spinal pain, in which, after the failure of drugs and dietetic treatment, the ice-bag had been used; the result being that the headache and spinal pain were quite removed, and the menses returned, after the use of a blister to the sacrum, so profusely as to be almost menorrhagic. Ice had been used, with excellent effect, in two other cases of cephalalgia, but in these cases applied to the head. He referred to three cases of delirium tremens treated by Mr. Hamilton of Stevens's Hospital, by the ice-bag, as recommended by him last year; and he gave some interesting thermometrical observations of a case of delirium tremens lately treated by himself on the same plan. When the ice was placed along the spine, the temperature of the axilla rose, and the pulse was increased in frequency, while the profuse sweating was checked; afterwards, it was thought well to put the ice to the head, when the result was diminished frequency of pulse and a fall in the temperature. A case of obstinate vomiting, occurring during pregnancy, which had resisted all treatment, was quite checked, and even nausea was removed, by the application of ice to the lower dorsal and upper lumbar spines. In a case of spinal myelitis, the temperature was raised, the pulse diminished in frequency, while it became fuller and stronger, and hyperæsthesia of the upper extremities was removed by the use of ice, and the paralysis was greatly diminished. In a case of chronic hemiplegia, it had failed to relieve the rigidity in the flexor muscles of the forearm, or to benefit the paralysis; and in a case of chorea, the result was not encouraging. He referred to a case of chorea, published by Dr. J. H. Benson, in which this method was successful, after the use of a brisk purgative. In conclusion, Dr. Hewitt gave his experience of the use of the hot-water bag in some cases of bronchitis. One of these was a case of chronic catarrh; and, though no expectorant was given, in three or four days the expectoration had become much more abundant, the dyspnoea was greatly relieved, and the cough considerably lessened. The thermometer revealed, on one occasion, after two hours' application of the hot water, a decrease of seven-tenths of a degree; and on another day the temperature decreased at first, but subsequently rose.

"Dr. Benson, jun., referred to several cases recently treated by him with the ice-bag. He believed the manner of its application, and the length of time necessary for its use, had not been sufficiently understood: and hence its frequent failures as a remedial agent. -Dr. Athill strongly advocated its use, and related a case of menorrhagia, in a girl aged

fifteen, in which he had applied it with remarkable success. Dr. Belcher approved of Dr. Hewitt's paper, and noticed the treatise of Esmarch, 'On the Use of Cold in Surgical Practice.'—Mr. Croly gave an interesting account of a case successfully treated by him with the ice-bag. Mr. Thorpe Porter had cured a case of hæmorrhage with it."

From the several Physicians whose opinions are expressed in the following passage in the Introduction to "Sea-sickness, and How to Prevent it," p. 39 et seq.

"But no reflecting physician who sees that the functions of the nervous, muscular, glandular, and circulatory systems, and therefore the processes of textural nutrition can be increased or lessened by modifying the temperature of the spinal region, will need the evidence adduced in the preceding pages in order to convince him that a power capable of influencing these several functions is also capable of acting remedially, and to an unprecedented degree, on the great majority of diseases; for he knows that whatever may be their causes, whatever organs or structures they may affect, they actually consist in disorder of some one or more of those functions. These considerations prompted the declaration of Dr. Routh at the London Medical Society, that the facts I have established 'open up the prospect of a great therapeutical revolution.' Other medical men who have also thoroughly grasped the general principles in question have expressed themselves to the same effect. Dr. Brereton, of Sydney, addressed me as follows: 'I have fully satisfied myself of the great value of your discovery—a discovery not of a few isolated facts, but of a *principle* of treatment, capable of most varied application, and like all principles, likely to lead to further, and as yet unimagined results.' Dr. Shuldham, of Maidstone, who has also seen and proved for himself the nature and importance of the principle in question, writes: 'I think we cannot consider ourselves too deeply indebted to you for having struck the great idea of the therapeutic power of heat and cold when applied to the spinal tract. A good many of our side have tried your ice and hot water bags with good results. Dr. Collins, of Leamington, only a short time ago at a homœopathic meeting spoke in glowing terms of your system. It deserves a college and professorships for itself.' Dr. Hayle, who kindly sent me the case of sea-sickness numbered XVIII., wrote at the same time,—'I take this opportunity of thanking you for a very effective additional means of combating disease. Your discovery opens up a wide field of speculation as to the primitive and secondary action of medicines.' Dr. O'Ferrall, the senior physician of St. Vincent's Hospital, Dublin, after informing me that he had found the spinal ice-bag 'very efficient in many cases of painful spasmodic affections seeming to depend on irritation of some portion of the spinal cord,' and that in 'a remarkable case of strabismus which had occurred during hooping cough' he had effected a cure by the same means, observes, 'the details of these cases are certainly calculated to support your views of the therapeutic effect of the agent in question.' Dr. J. Waring Curran, in his report published in the *Medical Times and Gazette*, of several cases of 'Diarrhoea with Convulsions' cured by the application of cold along the spine, remarks, 'The results happily obtained in my treatment of the foregoing cases, have convinced me of the great practical importance of Dr. Chapman's teachings, and constitute indisputable proofs that cold applied as he recommends exerts a great remedial power.' 'This grand object—a new therapeutic agent in our hands by which to control disease—seems,' says Dr. Benson, 'to have been accomplished in a very simple way by Dr. Chapman, and by the use of heat or cold to the spine a great number of diseases seem capable of being successfully treated. This power, moreover, extends not only to nervous diseases universally so called, but also to many of those which, previous to his discovery, were never considered to have had any causal relation to a deranged state of the nervous centres.'"

From the Athenæum, August 15, 1868.

"It is due, we think, to Dr. Chapman to say that he has been the first to make anything like a systematic attempt at applying our knowledge of nervous physiology to the treatment of diseases. . . . A little thought will show any one how comprehensive a theory of disease is stated in Dr. Chapman's nine propositions, and how universal a remedy is proposed. It is not alone diseases of the stomach and bowels to which heat and cold along the spine may be applied, but to diseases of the whole series of organs that are linked as it were to the brain and spinal cord by the action of the sympathetic nervous system. . . . We think his theories demand inquiry, and his practice a fair trial."

Now ready, in 8vo, cloth, price 14s.

NEURALGIA

AND

KINDRED DISEASES OF THE NERVOUS SYSTEM:

Their Nature, Causes, and Treatment: also a Series of Cases, preceded by an Analytical Exposition of them, exemplifying the Principles and Practice of Neuro-Dynamic Medicine.

BY JOHN CHAPMAN, M.D., M.R.C.P., M.R.C.S.

N.B.—The Series of Cases, preceded by the Analytical Exposition of them, may be had separately, in 8vo, cloth, price 5s.

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From the Medical Times and Gazette, June 14, 1873.

"In the present volume Dr. Chapman aims at something far more than a clinical generalization. . . . He would tell us of the immediate agency by which each and all of these disorders (of the nervous system) is caused, and knowing this he would give us a key to the direct treatment of them all. . . . The author himself sees and welcomes the far-reaching generalizations which his method opens out. He does not shrink from saying that here we have a key to disorderly actions of muscles, voluntary and involuntary, to morbid actions of glands, to disorders of local nutrition, etc.; that his method is a method not only of interpreting and curing neuralgia, but of commanding a vast number of very various maladies. Indeed, although no vital function depends primarily and in its simplest terms upon the nervous system, yet in man this system has gained so great a control over all actions in the economy that to command this system is practically to command the whole body. Dr. Chapman's system is therefore something like a panacea, and he asks to have it regarded in that light, and to have it called the doctrine of 'neuro-dynamic medicine.' He chooses at present to work this out on the ground of neuralgia, but he does not conceal that his ambition has a far higher flight in contemplation. . . .

"Dr. Chapman himself, however, speaks not as a mere theorist. He publishes in adequate detail a very large number of important cases, which together make up a large mass of evidence in favour of his views—evidence which cannot be disregarded. . . . These numerous examples of positive success cannot be without great weight; many of them, indeed, are very striking. We do not shrink from saying that these cases are really very striking, for Dr. Chapman relates them in cautious and temperate language; indeed, his whole book is very ably and systematically written, and reads like a trustworthy treatise. . . . Granting Dr. Chapman's therapeutical results to be good, there are several important stages in his superincumbent arguments which as yet are far from secure, though we are unable of course to deny their possible validity. In conclusion, we consider that Dr. Chapman has written a very able book, based on observations and arguments which have evidently cost him much labour and time. We consider that in this

book he makes a very strong claim upon the attention of his professional brethren, who are now bound to prove or disprove his allegations: we have therefore given the subject the space and the serious attention in our columns which so large and temperate a work fairly demands. We cannot now do more; but it is evident that if Dr. Chapman establishes any great part of his thesis, he has made one of the most remarkable therapeutic discoveries in the history of the art."

From the Medical Press and Circular, April 30, 1873.

"The work before us, from the pen of Dr. Chapman, presents an elaborate analysis of the symptoms of the whole group of neuralgic diseases, and an interpretation of those symptoms according to the theories of neuro-pathology to which the author has been led by observation of the effects of the particular system of treatment in connexion with which his name is chiefly known to the Medical Profession. The careful study of the natural history of the disease, and of the complications which it presents, evinces both careful and continued observation, and a thorough acquaintance with the literature of the subject. The facts and opinions of every writer on neuralgia, English and foreign, past and contemporaneous, are laid before the reader fairly but critically, and in a manner which renders the work a useful contribution to Medical literature, quite apart from the tenets, the presentation of which is its special object, and which we consider it the duty of the profession to put to the test.

"It is, indeed, quite time that the remarkable generalization long since arrived at by Dr. Chapman, and now supported by the vast array of facts and arguments contained in the volume before us, should receive the thoughtful consideration of all those engaged in the treatment of disease. His theory not only explains many morbid phenomena, but suggests a rational mode of treating the diseases on which they depend. This mode has been applied in hundreds of cases with such success that Dr. Chapman is entitled to ask his brethren either to try it in their own practice, or to state their reasons for not doing so, and we venture to assert that those who carefully read this volume will hesitate before they measure swords with the author. The work is an elaborate and well-sustained argument for the truth of the author's theory, and constitutes so important a contribution to rational therapeutics, that we proceed to furnish our readers with a detailed account of its contents."

From The Doctor, April 1, 1873.

"This work, though an exhaustive treatise on neuralgia and kindred diseases of the nervous system, puts forth claims which, if conceded, would involve nothing less than a revolution in both pathology and therapeutics. A critical sketch of 'Pathological Theories of Neuralgia' is given in chapter ii.; in chapter viii. Dr. C. B. Radcliffe's 'Theory of the Genesis of Pain' is subject to a searching critical analysis; and in chapter xi. Dr. Anstie's 'Pathology and Etiology of Neuralgia' is also elaborately summarised, while every argument in support of it is submitted to merciless scrutiny. The significance and bearing of every pathological fact adduced by these physicians in support of their respective and, indeed, kindred theories, are carefully examined, and after weighing the whole of the evidence presented in favour of these theories, our author sums up its value in each case in a concluding paragraph, and gives judgment against them. As examples of critical analysis, logical acumen, complete mastery of the subjects dealt with, and crushing confutation of the doctrines discussed, the chapters deserve special attention.

"The wide range of subjects strictly cognate, however, and having a direct bearing on the main theme, which are discussed in this chapter [on the Pathology of Neuralgia], and the thoroughly exhaustive and scientific way in which they are handled, present striking evidence of the author's extensive knowledge, profound as well as logically consistent thought, complete familiarity with every aspect of the problem dealt with, and of his power of skilfully arranging all the facts and arguments relating to it, so as to converge them to one issue, and thus to lead his readers irresistibly to the conclusion, which it is the aim of this chapter to establish. A glance at the topics discussed under the head of one group, namely, Group vi. for example, will suffice to give an idea of the extent of area traversed, though, of course, it can convey no notion of the thoroughness and originality with which the work is done.

"We have only to add that the work, as a whole, reflects credit on the Medical literature of the day. In a lucid style, and with logical precision, Dr. Chapman has expounded a theory that every practitioner ought carefully to weigh, and has enforced his doctrines with a mass of evidence that entitles him to a foremost place among those accurate clinical observers who are helping to advance scientific therapeutics."

*Preparing for Publication,***EPILEPSY, PARALYSIS,****AND OTHER DISEASES OF THE NERVOUS-SYSTEM.***Cases illustrative of their Successful Treatment, chiefly by means of Ice.**From the Medical Mirror, Feb. 1867.*

"The appendix to Dr. Chapman's pamphlet on the 'Functional Diseases of Women' contains seven cases of epilepsy, in which his treatment appears to have been attended with extraordinary success; and, what is very remarkable, in one case, the only one in which full particulars are given, while the general health immensely improved, the patient's vision, which previous to treatment had become gravely impaired, was completely recovered. Dr. Chapman also gives a case of infantile convulsions with congestion of the brain, one of laryngismus stridulus, and one of paralysis (hemiplegia), cured by means of ice. But perhaps the most interesting evidence of the remedial power of cold applied along the spine, consists in Dr. Chapman's account of his experience of two cases of diabetes, which he believes to be—like each of the maladies already passed in review—a disease of the nervous system. He has also published, in the *Journal of Mental Science* for July, 1866, fifteen cases. Four of these were cases of epilepsy, in which the fits were completely arrested. There are two cases of cerebral anæmia, or fainting fits, also completely arrested. There is a case of congestive apoplexy with paralysis in which complete recovery was effected; and among the other cases of paralysis which are given we may especially mention the case of a child suffering from paralysis of the upper and lower extremities, with rigidity. Besides the case of congestive apoplexy just mentioned, Dr. Chapman gives three other cases of grave cerebral disorder in which a cure was effected by his method."

The following passage is extracted from the Introduction to DR. CHAPMAN'S book on "Sea-Sickness," second edition:

"The efficacy of the spinal ice-bag in the treatment of convulsive affections, including laryngismus stridulus, choræa, infantile convulsions, and epilepsy, I have proved most conclusively, in a paper which, in March, 1867, I read to the Medical Society of London. I gave numerous cases in which, by the treatment in question, epileptic fits have been completely arrested—the general health of the patients being improved meanwhile, and I have published cases of laryngismus stridulus, and infantile convulsions rapidly cured, after drugs had been tried in vain. Happily, my successful experience in the treatment of convulsive affections has been already confirmed by several other physicians—viz., Dr. Routh, Dr. Rogers, Dr. Edmunds, Dr. Wilkinson, Dr. Griffiths, and Mr. Ernest Hart, of London; Dr. J. Waring-Curran, of Bexhill; Dr. Barber, of Ulverstone; Dr. J. H. Benson, of Dublin, and Dr. De Faye, of Brussels. I have published evidence that prolonged muscular rigidity, whether due to acute or chronic disorder of the nervous centres, may also be treated successfully by means of ice: a case of the former kind, which I called 'Tetanoid Paralysis of the four extremities,' and which I treated successfully, the patient being completely restored, was communicated to the Harveian Society, and published in the *Medical Press and Circular*, in May, 1867. Dr. Edmunds has published the case of a woman with a nearly similar and equally dangerous malady, which was cured by ice to the spine, after medicine had proved useless. Dr. Roberts, of Northallerton, Yorkshire, who consulted me about a case of traumatic tetanus, which had 'remained almost stationary for a fortnight,' and who had 'given the patient belladonna and morphia to no purpose,' applied ice, by means of two bags at once, in the way I suggested, and, as he informed me, effected a cure. Dr. Wm. Ogle, of St. George's Hospital, published, in 1866, a case of 'tetanoid convulsions overcome for a time by application of ice to the spine,' and appended the following comment:—'The substantial relief from the ice application was not a little interesting, and speculation upon the probability of a greater and more permanent benefit from a longer application of the ice could not be resisted.' Mr. Hargrave, surgeon, of Dublin, has also published a case of tetanus in which the like substantial relief was given by the application of ice in an ox-gullet, and in which, had a properly-constructed spinal ice-bag been used a cure would probably have been effected. Unfortunately the gullet which was used burst in the night, and, therefore, ice was not afterwards applied. The muscles of the lower jaw had already become so relaxed that the patient could open her mouth and take nourishment.

The *Australian Medical Journal* for March, 1866, contains a report of a case of tetanus treated successfully by the application of ice along the spine. The *British Journal of Homoeopathy* for April, 1866, mentions two cases treated successfully by the same method. In Professor Morgan's case of 'cerebro-spinal inflammation' already mentioned, the rigidity of the muscles of the trunk and extremities also yielded to the influence of the spinal ice-bag."

The *Medical Press and Circular* (May 1, 8, 29, 1867), published a paper by Dr. Chapman, entitled "Paralysis: Cases Illustrative of a New Method of Treating it by the Application of Cold or Heat along the Spine," which he read at a meeting of the Harveian Society of London, April 4, 1867. In addition to the cases treated by himself and reported in that paper it contains an account of a case of paralysis of the lower extremities treated successfully by the same method by F. Broughton, F.R.C.S., and states that Dr. Russell Reynolds mentioned to Dr. Chapman "a case of complete paraplegia in which a cure had been effected by the spinal ice-bag, and with a rapidity even more astonishing than that distinguishing the case related by Mr. Broughton." In the Introduction to his book on "Sea-Sickness," second edition, Dr. Chapman states that Dr. Blake, of Leamington, Dr. J. H. Benson, and Dr. D. B. Hewitt, of Dublin, and Dr. E. R. Townsend, jun., of Cork, have also treated paralysis successfully by the same method. The three last-named physicians have published reports of their cases. The reports of Drs. Hewitt and Benson are published in the *Medical Press and Circular* of April 22 and August 19, 1868, respectively; and that of Dr. Townsend will be found in the *Dublin Medical Quarterly Review* for August, 1868.

FUNCTIONAL DISEASES OF WOMEN.

Cases illustrative of a New Method of treating them through the Agency of the Nervous System, by means of Cold and Heat.

Also, an Appendix, containing Cases illustrative of a New Method of Treating EPILEPSY, INFANTILE CONVULSIONS, PARALYSIS, and DIABETES. By JOHN CHAPMAN, M.D. 8vo, price 2s. 6d.

From the Lancet, Feb. 20, 1864.

"This interesting monograph requires reading and testing clinically. It is original in its views."

From the Medical Times and Gazette, Jan. 23, 1864.

"Dr. Chapman expresses his belief that many maladies not usually held to depend on nervous agency—such as those in the title (diabetes and constipation)—really originate in that manner. . . . The subject deserves the serious attention of the profession, not only from the high character of its originator, but also from the amount of evidence which he has already brought to bear upon it. He, however, seems to be as yet only at the outset of his investigations, and promises more detailed information hereafter. In so doing he will confer a great boon on physiology and practical medicine."

From Clinical Notes on Uterine Surgery, by J. MARION SIMS, M.D., p. 41.

"Nor should he (the student) fail to study the brief monograph of Dr. Chapman on Cold and Heat in the Treatment of the Functional Diseases of Women."

From the Medical Mirror, April, 1867.

"In his pamphlet, 'Functional Diseases of Women,' Dr. Chapman gives thirty-two cases which he had treated successfully either by cold or heat, or by both together, applied along the spine. Six of these cases were cases of defective and painful menstruation, which were cured by the application of the spinal ice-bag. . . . One of the foregoing cases exemplified the curative power of the spinal ice-bag over leucorrhoea as well as deficient menstruation.

"In a very interesting section, entitled, 'Coldness of the Feet: its Relation to Functional Diseases of the Womb, and its Cure by Means of Ice,' he gives a number of cases proving that its application along the lower third of the spine causes the lower extremities of patients who had suffered habitually from coldness of the feet to become permanently warm. In our last number we published reports of two cases illustrative of the power of the spinal hot-water bag in arresting menorrhagia. We need, therefore, only

allude to the six cases of this malady treated successfully by means of heat, and reported in detail in Dr. Chapman's pamphlet. He also gives a very curious case tending to prove that the development of the mammæ may be influenced by cold and heat applied to the back.

"In the *Journal of Mental Science* for April, 1865, Dr. Chapman gives a remarkable case of the sickness of pregnancy which he had effectually controlled in the same way. The lady in question had had several miscarriages brought on by the violent retching incident to her sickness, which was always continued until the ovum was expelled; but owing to careful treatment, by means of the spinal ice-bag, she was enabled when last pregnant to retain her food, and to carry the child to the full term.

"There can be no doubt that any man who will, with an unbiassed and philosophical mind, consider Dr. Chapman's cases, must admit that he has made a discovery which promises to do much good to suffering humanity. . . . Not only is the result of ice effective towards increasing the vitality of the uterus, and promoting the period, but the pain is diminished. The dysmenorrhœa is, in fact, cured. . . . It would be well for the patients who are supposed to be suffering from mechanical dysmenorrhœa, if before the uterus was cut with hysterotomes, a proceeding in the hands of some practitioners not always free from danger, that Dr. Chapman's plan was made the preliminary treatment. Drs. Marion Sims, Greenhalgh, and Routh, would probably cut less often. . . . Section III. is the first philosophical essay that we seem to have read on cold feet. . . . We must with him admit, that ice applied to certain parts of the spinal cord, will promote the menstrual flow, and produce warm feet; and the nine cases mentioned are fully confirmatory of this view. . . . It cannot be doubted, but that the obstetric physician may derive from these views of Dr. Chapman's great assistance in the treatment of many uterine cases, hitherto almost incurable, always tardy and tedious, both to patient and himself. Section IV. treats of hæmorrhage and menorrhagic pain cured by means of heat. We are almost better pleased with Dr. Chapman's results here than with the former. The correctness of former results following the use of ice, is greatly enhanced when we find exactly the opposite effects following the use of heat applied to the spinal centre. We cannot fail to be struck with the rapidity with which the menorrhagia is controlled. Ergot has not the same power; and the advantages of this plan in many cases of fibroids, change of life, flooding, is very conspicuous. We have read Dr. Chapman's book with pleasure, and we are pleased with his manner of working. It is clear he has made a very useful discovery and more useful applications, and he knows it. He is not an enthusiast simply. He is a devoted learner and a modest teacher."

From DR. ROUTH's Speech at the London Medical Society, March 18, 1867, reported in Med. Press and Circular, April 8, 1867.

"He said the method had been tried in a case of what he called 'convulsive action of the stomach,' associated with pregnancy. The patient suffered from sickness continually, for nearly three months; it was no use giving her drugs, for they came up again directly. She had been supported to some extent by injections per anum, but was in such a state of exhaustion that the question of inducing abortion, in order to stop the sickness, was entertained. By Dr. Chapman's advice, the spinal ice-bag was applied. The immediate effect was the production of refreshing sleep; by continuance of the treatment, the sickness steadily and completely subsided, and the patient is now well and gaining flesh. Dr. Routh said he had tried the method in a case of profuse menorrhagia; after the double column hot-water bag had been applied during an hour, the flow ceased."

From DR. FULLER's Speech at the Harveian Society, Nov. 21, 1867, reported in Med. Press and Circular, Dec. 11, 1867.

"Dr. Fuller avowed himself a believer in spine-bags, the efficacy of which, he said, he had over and over again experienced in certain cases of menorrhagia and dysmenorrhœa."

In the Introduction to his book on "Sea-Sickness, and How to Prevent It," second edition, Dr. Chapman refers to the following medical practitioners, who have informed him of their verification of the truth of his statements concerning the effects of the spine-bags on the uterine circulation:—

Dr. Brereton, of Sydney; Dr. de Faye, of Brussels; Dr. J. H. Benson, of Dublin; Professor Maclean, of Netley Hospital; Dr. Hayle, of Rochdale; Dr. Rayner, of Malvern; Dr. Barber, of Ulverston; Mr. P. Harper, Mr. Hammerton, Dr. Fuller, Dr. Goolden, of London; Doctress Densmore, of New York; and Miss Firth, lately Matron of the Endell-street Maternity Hospital, London;

SEA SICKNESS, AND HOW TO PREVENT IT:

An Explanation of its Nature and Successful Treatment through the Agency of the Nervous System, by means of the Spinal Ice-bag.

With an Introduction on

The General Principles of Neuro-Therapeutics.

Second Edition, in 8vo, price 3s.

[The work contains reports of about Forty Cases, proving that Sea-Sickness is both preventable and curable by means of the Spinal Ice-bag.]

From the Lancet, March 4, 1865 (referring to the First Edition).

"Certainly so far as the history of these voyages across the Channel goes, it is highly in favour of the author's ingenious recommendations . . . We advise, both for practical and theoretical purposes, that the pages of this pamphlet be carefully perused."

From the Medical Press and Circular, 1867.

"The reader will of course have perceived that the remedy to which we allude is that proposed by Dr. Chapman. The application of this theory to the treatment of sea-sickness, involves a consideration of the immediate cause of that distressing malady. Dr. Chapman is convinced that the proximate cause of sea-sickness consists in an undue increase of blood in the nervous centres along the back, and especially in those segments of the spinal cord related to the stomach and the muscles concerned in vomiting. Dr. Chapman alleges that the pallor and coldness of the surface characteristic of sea-sickness are due to the contraction of the peripheral blood-vessels in the way we have just explained, that the cold sweat and copious secretion of mucus often excited from the stomach are due to excessive stimulus from the spinal cord, which he affirms to be the efficient cause of glandular action, and that, as is well-known, the spasms of the voluntary muscles, proceeding in rare instances to convulsions, are also due to hyperæmia of the cord. This hyperæmia of the nervous centres is caused, as he maintains, by the motion of the vessel acting on the brain, the abdominal viscera, and the spinal cord, and, if the theory be correct, it is obvious that by preventing the hyperæmia, we take away a segment of the circle which must be complete in order to produce the disease. This he does effectually, if we may trust the reports of cases, by the application of ice along the spine. . . . According to the reports of patients, it not only arrests or prevents the sickness, but the cramps or spasms that frequently accompany it, at the same time restoring the circulation to its normal standard, and so changing the pallid cold prostrate condition of the victims of sea-sickness to the ruddy, warm glow, characteristic of health and activity of the circulatory function. . . . It would seem from numerous instances, that properly applied, the ice is not only safe, but positively pleasant. . . . Not only is the ice not painful, but, according to the testimony of the great majority of patients, quite the reverse. . . . Moreover, the soothing effect is so general, that sound and refreshing sleep is frequently induced, so that we constantly read of patients—men, women, or little children—falling asleep on the ice-bag, and waking up refreshed and hungry."

From the Medical Press and Circular, Nov. 18, 1868.

"Whether Dr. Chapman's speculations as to neuropathy be true or no, there is no doubt that they contain many of the features of a correctly formed theory. He gives us in an admirably clear introduction, a synopsis of his views as to neuro-physiology, setting out from the assumption that the sympathetic is the excitomotor nerve governing the vascular system, and that the functional activity of the glands is excited or maintained by a stimulus from the cerebro-spinal axis. The former of these assumptions is now pretty generally admitted since the clear demonstration given of the fact by Bernard and Séquard. The latter proposition is an extension of the views of Bernard, Ludwig, and Pfüger. Bernard proved that the parotid and submaxillary glands receive their nervous supply on the one hand from the brain and spinal cord, and on the other, from the sympathetic; and demonstrated by experiments on animals that when the former are in action the maximum of blood is supplied to the glands and the maximum of saliva secreted, whilst when the latter are in action it modifies the volume of the arteries and regulates the supply of blood.

Dr. Chapman states that he has discovered that by applying heat along the spine he stimulates the glands of the skin and mucous membrane, and by applying cold he restrains or depresses them, thus increasing or arresting their secretions. According to our author then, the mucous and cutaneous glands act under the control of a special set of nerves derived from the brain and spinal cord, and distinct from the sympathetic. Glandular action, in short, and glandular inaction, are due, the first to a preponderance of cerebro-spinal influence, the second to a preponderance of sympathetic nerve force. He maintains that all glands possess positive motor-nerve fibres from the cerebro-spinal axis, even in the cases when anatomy has not discovered such to exist. From these postulates Dr. Chapman requires our assent to the importance of endeavouring in all cases of excessive discharges from glands, such as diarrhoea, leucorrhœa, bronchorrhœa, &c., to paralyse this cerebro-spinal influence, and thus to inhibit the supply of blood to the glands which causes the discharge.

"So much, in brief, for the theory; and now for the verification of the law, our author points to the evidence adduced by a number of medical men, among whom we perceive with pleasure many most distinguished Dublin practitioners, as to the rapidity with which cases of diarrhoea, dysentery, delirium tremens, constipation, vomiting, dysmenorrhœa, amenorrhœa, menorrhagia and leucorrhœa, cholera and diabetes, have been cured. Paralysis and epilepsy have, according to much excellent medical evidence, been frequently cured by the application of this theory. If vomiting on land be under the dominion of this mode of treatment, we shall of course not be surprised to find that sea-sickness is amenable to it.

"The moral we would derive from perusing this admirably written work is, that we ourselves feel emboldened to absolve ourselves from a rash vow never to cross the Atlantic. Armed with one of our author's ice-bags, we are determined to dare '*rabiem noti*;' and we invite all our readers to peruse this work carefully and without prejudice, and our medical ones to make a careful trial of a process which so rationally promises to abolish one of man's greatest sufferings—sea-sickness."

From a Letter of S. M. BRADLEY, Surgeon, Cunard Service, in the Lancet, December 3, 1864.

"In severe cases, where other remedies have failed, I have very generally found it (the spinal ice-bag) do great good. I have applied it to young children, delicate women, and old people. In no case does it do harm; but in the great majority of instances it soothes the nervous irritability which so commonly accompanies sea-sickness, induces sleep, and so enables the stomach to receive light food, and consequently relieves exhaustion. . . . I order it to be kept on a couple of hours; though if the patient sleeps, as is often the case, I never remove it until after waking."

From a Letter addressed to Dr. CHAPMAN, June 3, 1865, by Dr. HAYLE of Rochdale.

"I recommended a patient about to cross the Atlantic to try one of your ice-bags for sea-sickness. The result was most satisfactory. He was never sick when wearing the ice-bag. Once he went without it, and then, and then only, was he sick."

From a Report of "Case of Sea-Sickness successfully treated by Ice to the Spine." By B. LEE, M.D., in the Philadelphia Medical and Surgical Reporter.

"The case (in question) is as conclusive as a single case can be, in regard to the great practical value of Dr. Chapman's discovery. . . . The effects of the application of the ice-bag were little short of miraculous."

The section of Dr. Chapman's Pamphlet entitled "Cases and Results" contains reports from seven medical men, besides those supplied by Dr. Chapman himself, of cases in which the efficacy of the spinal ice-bag as a remedy for sea-sickness had been clearly demonstrated. The first five of those reports are numbered respectively xviii., xxiv., xxv., xxxiii., xxxiv.; the remaining two, from surgeons of ocean-steamers, are given at page 110.

The following letters also record the experience of physicians:—

"Quinta Andrado, Funchal, Madeira, Oct. 26, 1863.

"Dear Sir,—Allow me to apologize that the exigencies of packing, leave-taking, and winding up my affairs prevented my acknowledging your kind present of the spinal ice-bags. I took a brass basin and a blanket with some ice from Liverpool. The sea was very calm, and I was not sick for three days. My wife was sick the first day, and I applied the spinal ice-bag. She experienced considerable relief, but did not feel inclined

to come on deck with the bag on her back, and soon fell asleep. In three hours she sent the bag to be refilled. She was able to eat some dinner, and felt the sensation of cold to the back agreeable. As my ice was now done, I did not again apply it.

"On the fourth day the ship commenced to pitch, and this made me sick, though I had become accustomed to the rolling. I applied for ice to the steward, but as the quantity on board was small and much needed for the African voyage, it was with some difficulty that I got enough partially to fill a bag long enough for me. The ice too melted very rapidly, and I had to break it in large pieces; it was not therefore applied to every portion of the spinal tract until a portion of the ice melted. For about half an hour I noticed no difference in the feeling of nausea. I then began to feel the desire to sleep, but resisted it, as I wished to note my sensations. It soon, however, overpowered me. I lay down on my cloak on deck, and slept for an hour. I awoke quite well, and did justice to my dinner, but I was rather disappointed to note that the pitching of the ship was considerably abated.

"From my small experience I should be disposed to recommend your bags in severe cases of sickness, on *long* voyages. I should expect them, where they did not cause complete recovery, to afford marked relief, induce sleep, and cause food to be borne. On short voyages they must be very useful and save much suffering.

"I remain, Sir, yours faithfully,

"John Chapman, Esq., M.D., London."

"W. W. IRELAND, M.D."

"Dear Sir,—Allow me to say, in reply to your note to my son Dr. Shore, received this week, that he has been abroad many months, and, I fear, cannot return till next spring. He made use of the ice in crossing, and found the greatest benefit, having always suffered extremely from sickness. I have also seen much comfort and relief derived from the application of your ice-bag to the spine, under Dr. Shore's direction; and in a case of epilepsy, the effect of warming the whole system, by placing the bag on the spine, was wonderful."—Nov. 10, 1868.

DIARRHŒA AND CHOLERA:

Their Nature, Origin, and Treatment through the Agency of the Nervous System. By JOHN CHAPMAN, M.D. Second Edition, enlarged. 8vo, cloth, 7s. 6d.

From the Medical Times and Gazette, Nov. 3, 1866.

"This is a remarkable book, and worthy the serious attention of every one of our readers who has the leisure and inclination to think out his own opinions upon an interesting and difficult subject. We do not say that the theory of cholera which the author proposes is correct, or that the treatment based upon it is sound. Such an admission is not necessary to justify our recommendation. Even a false theory when rightly constructed has its uses, and, instead of hindering, hastens the advance of knowledge. Every one possessing the slightest acquaintance with the history of astronomy knows that the doctrines of cycles, epicycles, and ellipses were begotten naturally and necessarily out of each other, and that if Kepler had not so often propounded speculative errors, Newton would not so often have hit upon speculative truth. When men of science disclaim hypotheses, they are either unfit for their vocation, or, like Newton, they are better than their creed. Hypotheses are at once the effects and causes of progress: and one might as well attempt to preserve and employ an army without organization, as to preserve and employ phenomena without a theory to weld them into one. But the theory must be provisionally, if not positively, true; it must be intelligible and consistent; it must explain a greater number of facts and reconcile a greater variety of apparent contradictions than any which has preceded it, and it must have become developed, not by the addition merely, but the addition and solution of subsidiary explanations.

"Now the book before us contains a speculation which, whether true or false, exhibits in its outlines, if not in its details, the essential features of a well-constructed theory. It is in harmony with the results of the most recent physiological investigations: it is ingenious, clearly put, happily illustrated, logically argued, and meant to be a more comprehensive and simple explanation than has yet been given of the phenomena of choleraic disease. For these reasons we have considered it our duty to place at once before our readers a sketch of Dr. Chapman's work, and to give judgment on its general character.

"The introduction to Dr. Chapman's book is occupied by a sketch of his views of neuro-physiology, and as they properly constitute the root of his pathology, it is necessary

to consider them. He sets out with two postulates—first, that the sympathetic is the excitomotor nerve presiding over the vascular system; and secondly, that the functional activity of every gland is excited or maintained by a stimulus sent from the cerebro-spinal axis. The former doctrine, which derives its claim to assent from the experiments of Brown-Séquard and Claude Bernard, is now, with certain qualifications and restrictions, accepted as true by nearly all physiologists. The latter, based upon the recent discoveries of Bernard, Ludwig, Pfüger, and others, has, as Dr. Chapman thinks, been raised to the rank of a general law by his own observations.

“Bernard has proved that the parotid and submaxillary glands receive their nervous supplies, on the one hand, from the cerebro-spinal system, and on the other from the sympathetic; and he has demonstrated by experiments on various animals that when the former are in action the maximum of blood is supplied to the glands and the maximum of saliva secreted, and that when the latter are in action it is shown in modifying the volume of the arteries and so regulating the supply of blood. Dr. Chapman has extended this discovery to all the other glands of the body; but in virtue of some experiments about to be mentioned, he puts an interpretation quite different from that of Bernard upon the purpose of the cerebro-spinal gland nerves. The latter conceives that they act by producing a kind of paralysis of the sympathetic; the former that they act by stimulating the gland-cells to the active selection from the blood of the materials essential to the elaboration of their secretions.

“According to Dr. Chapman's statements, he has discovered that the application of heat along the spine stimulates the glands of the whole cutaneous and mucous surfaces, and that conversely the application of ice restrains or depresses them; that in the former case the secretion is increased, in the latter diminished or suppressed. Seeing, then, that secretions are arrested when the surfaces are full of blood, and abundant often when the surfaces are anæmic, he proceeds to reconcile and explain these apparent paradoxes by propounding the hypothesis, that the mucous and cutaneous glands act under the control of a special set of nerves distinct from the sympathetic, and derived from the cerebro-spinal system. He conceives that while the sympathetic regulates the amount of blood entering the gland, the cerebro-spinal nerves, by their action on the gland-cells, determine the intensity of the force by which it is attracted to them: and in this way he shows that glandular activity and glandular inaction are due, in the former case, to a preponderance of cerebro-spinal, and in the latter to a preponderance of sympathetic, nerve force. The cerebro-spinal he calls the positive motor, and the sympathetic the negative motor, nerves of a gland; and it is by assuming an excessive stimulation of the former, causing the gland-cells to draw copious currents of blood through the obstruction of spasmodically constricted arteries, that he ingeniously explains the seemingly paradoxical but common phenomenon of an anæmic skin pouring forth a greasy sweat.

“Dr. Chapman next passes in review the anatomical nerve relations of the various glands, and concludes that the disposition of the nervous system is such as to enable every one of them to receive a positive motor nerve from some part of the cerebro-spinal system, and holds ‘that in every case in which glands are not yet proved by anatomical evidence to possess positive motor nerves from the cerebro-spinal system, physiological, pathological, and even therapeutical facts prove that they must be so innervated, while anatomy offers no evidence whatever to the contrary.’

“Having laid down these physiological foundations, Dr. Chapman proceeds to build thereon his remarkably ingenious theory of cholera. To this he might happily have prefixed for motto the axiom of Newton—‘*Causas rerum naturalium non plures admitti debere, quam quæ et veræ sint et earum phenomenon explicandis sufficient;*’ or, still more happily, the assertion of Bernard who, when speaking of the nervous system, says, with a sublime audacity that ‘while it is the origin of all the normal phenomena of life, it is also the origin of all pathological action.’ This theory will be most clearly expressed in the form of the following propositions:—

“1. All the phenomena of cholera are due to simultaneous hyperæmia of the spinal cord and of the sympathetic nervous system.

“2. All the phenomena of cholera are naturally divisible into two classes, according as they have their origin in the sympathetic ganglia or in the spinal cord.

“3. All active or positive phenomena are due to hyperæmia of the spinal cord.

“4. All passive or negative phenomena are due to hyperæmia of the sympathetic.

“As illustrations of what Dr. Chapman means by positive phenomena, we may mention early diuresis, excessive activity of the intestinal follicles, sweating, cramps, and internal elevation of temperature. As illustrations of negative phenomena may be specified arrest of secretion, aphonia, depression of external temperature, cold breath, loss of cutaneous sensibility, and serous exudation.

"The author neither directly affirms nor denies any primary affection of the blood in cholera. By implication, however, it is denied; and the only logical conclusion to be drawn from his facts, arguments, and illustrations is that the exciting causes of this disease, whatever they may be, exert their primary action immediately upon the nervous system.

"It is only by a close examination of the detailed application of the hypothesis as a means of rendering intelligible the proximate cause of every special symptom that a comprehensive conception of the hypothesis becomes possible. We must content ourselves with the following examples:

"A copious secretion of pale urine is mentioned by Parkes and others as one of the early symptoms of cholera. Dr. Chapman attempts to prove that this is due to hyperæmia or exalted functional activity of the spinal cord, and maintains that in the onset of cholera the cord is in this condition, stimulating the kidneys to excessive action. But the activity of the organic processes being less energetic than normal, owing to hyperæmia of the sympathetic, which has contracted the arteries, the metamorphosis of tissue is correspondingly lessened, and consequently the amount of the products of organic distintegration usually excreted by the kidneys is less than in health. It is thus, according to our author, inevitable that the conjoint hyperæmia of the sympathetic ganglia and spinal cord results in the discharge of urine paler and more abundant than normal. But as the disease progresses, the negative motor nerve of the kidneys—that is, the branches of the sympathetic distributed to the renal arteries—acts so energetically upon the blood-vessels as almost wholly to cut off the supply of blood to the kidneys. The inevitable result of this is cessation of their functions, or, in other words, the suppression of urine. When patients begin to recover, hyperæmia of the sympathetic ganglia subsides, and in consequence the spasmodic contraction of the renal arteries is relaxed, blood gains free access to the gland-cells, and the secretion of urine returns. If the sympathetic ganglia become very anæmic or much exhausted, or if the positive motor nerve of the kidney be much stimulated, the kidneys become excessively congested, and albumen passes into the urine. In this way Dr. Chapman ingeniously accounts for the increase, decrease, and final suppression of urine in cholera; for the return of this secretion with reaction; and for the condition of the kidneys observable in cases of death during collapse.

"Dr. Chapman's mode of accounting for the rice-water evacuations of choleraics, is as follows: He affirms that, owing to excessive hyperæmia of the spinal cord, the mucous glands of the stomach and bowels are intensely stimulated; that the energy of the positive motor nerves by which they are so stimulated predominates greatly over that of the negative motor nerves of these glands; that consequently copious currents of blood are drawn to them, notwithstanding the constricting force exerted upon their arteries by the sympathetic; that mucus is secreted in enormous quantities; and that the cells of the secreting structures are generated, developed, and shed abortively in extreme abundance. He cites evidence to prove that the flocculent portions of the discharge consist of mucous flakes entangling a countless number of imperfectly formed and prematurely shed cells. With respect to the watery part of the evacuations, he says it is not secreted but exuded from the congested venous radicles of the whole alimentary canal. He adds that, inasmuch as its glands are exceedingly active, they, by the force exerted on the blood in their capillaries, press it forward continually into the intestinal veins, which speedily become extremely distended, and that as the blood is hindered from passing freely through the liver, now in a condition like that of the kidneys, the venous radicals become so distended that their delicate coats can no longer resist the pressure of their contents, the watery part of which escapes into the alimentary canal.

"We are unable to give any further illustrations of Dr. Chapman's method of accounting for the productions of the symptoms of cholera. Each receives a consistent and intelligible explanation, but we would direct the reader's attention more particularly to his exposition of the immediate causes of the increase or persistence of heat in the body after death; of the rise of temperature in certain parts before dissolution; of post-mortem muscular contractions; and of the differences in the relative activity of the positive and negative motor nerves in different cases.

"We must pass over the chapter on the causes of cholera, which displays great originality and ingenuity in reconciling and explaining the various modes of action of causative agencies, and a singularly happy power of using his knowledge for the setting forth of new analogies, and the bringing together apparently the most contradictory phenomena for the support of a general law.

"The chapter on treatment consists of two parts. In the first Dr. Chapman discusses the remedial value of cold and heat; in the second, the value of various drugs.

"If Dr. Chapman's theory of cholera should turn out to be correct, it would seem obvious that the only rational treatment consists in the adoption of such means as will

most rapidly and completely subdue the hyperæmia of the spinal cord and sympathetic ganglia and reestablish the healthy equilibrium of the circulation. Dr. Chapman thinks that the time may come when this will be effected by the proper application of galvanism; but he maintains that in the present state of knowledge there is 'no available power of subduing hyperæmia of the automatic nervous centres comparable to that of ice applied along the spine.' In proof of this, he appeals to the testimony recorded by himself and others that 'the leading symptoms of cholera—vomiting, purging, coldness, and cramps—when met with separately as manifestations of other diseases, are capable of being subdued in the majority of cases by the application of ice along the whole or a part of the spine.

"Dr. Chapman's treatment of cholera consists essentially in the application of ice to the spine and of heat to the general surface; and he is emphatic in insisting that the one should not be used without the other. As importance is attached to the exact manner in which this method of treatment is tried, it is but fair that those intending to test the value of Dr. Chapman's therapeutical proposal should make themselves familiar with what he says before beginning their experiments.

"The work concludes with a record of cases and an analysis of results.

"Whatever may be the final judgment pronounced upon Dr. Chapman's theory of cholera, it must be admitted that he has said nearly all that could be said in its favour. Its strength lies in its comprehensive and simple explanation of seemingly contradictory phenomena by the application of a recognised general truth; its main, and in our eyes great, weakness lies in the denial of any primitive affection of the blood. But even if wholly false, the theory will play an important part in the discovery of that which is true. The work is well written, methodically arranged, connected in all its parts by a pervading unity of design, and will take a permanent place in the history of the disease of which it treats."

From the Medical Press and Circular, Nov. 6, 1867.

"The part of Dr. Chapman's work devoted to Cholera comprises six chapters, entitled respectively—(1) Definition, History, and Symptoms; (2) Post-mortem phenomena in cases of Death during Choleraic Collapse; (3) Pathology of Cholera; (4) Causes of Cholera; (5) Treatment, comprising (a) treatment by cold and heat, and (b) treatment by medicines; (6) Cases and Results. Chapter I. we must pass over altogether. Chapter II. contains a concise yet detailed description of all the recognised phenomena observable after death during collapse; and every one of these, as well as the several symptoms of the disease characteristic of its successive stages, receives an elaborate and complete explanation in the course of Chapter III., which is distinguished alike by the originality of the views it expounds, the ingenuity and cogency of the arguments by which they are enforced, the faithfulness to well-established facts which by way of confirmation or explanation are referred to at every step, and by the mastery with which the author co-ordinates and uses his abundant materials for the establishment and maintenance of his doctrines. . . .

"Unable to dwell longer on the author's strikingly original exposition of what he calls the negative phenomena of cholera, we select for quotation a few paragraphs which throw a flood of light on certain facts which, thoroughly established, have hitherto remained as utterly inexplicable as they are astonishing. . . .

"Whatever doubts may be entertained concerning his etiology, there can be none as to the consummate skill with which the facts adverted to in each section of this chapter are ranged and presented so as to establish the doctrine which the author advocates. The various influences enunciated have been adverted to by many previous writers, but, so far as we are aware, the several links in the chain of causation by which these influences produce the phenomena of Cholera; have never before been exhibited: it is in this respect that the chapter under consideration displays an amount of insight and originality, as well as logical cogency, which cannot fail to commend it to every philosophical mind. It is one thing to see that there is some causal connexion between great atmospheric heat, wide ranges of temperature, prolonged marches, and influences operative during the night, on the one hand, and the origination of Cholera on the other; but it is quite another thing to show distinctly, and in detail, the *modus operandi* of these agencies: this achievement, in respect to each agent discussed, constitutes the characteristic excellence of Dr. Chapman's elaborate exposition."

From the Medical Mirror, March, 1867.

"The light thrown by these original ideas on the phenomena in question during the successive stages of cholera must, we think, impress every reader with the conviction that

the hypothesis propounded by Dr. Chapman; whether absolutely true or not, at least affords a complete solution of a pathological problem of the first magnitude, and fulfils all the requisites which a true explanation supplies. . . . It embodies a great amount of novel truth; it is ingenious, well reasoned, admirably supported, and not only in harmony with, but in advance of, the results of the highest investigations of the time. The subject is treated with real perspicuity and candour, and with a remarkable desire to appreciate every fact at its true value; and the work, as a whole, lacks nothing that is needed to make it a rare specimen of the application of the severest logic, and the most precise manipulation of language to practical science. Indeed, the book is characterized not only by great ability, by originality of thought, by judicial acumen, and by familiarity with the spirit and tendencies of modern research, but also by a rare power of reconciling apparently contradictory phenomena, and marshalling them together for the support of a common purpose."

From the Journal of Mental Science, Jan. 1867.

"Dr. Chapman applies his well-known views of the pathology of disease, and of its treatment through the agency of the nervous system, with wonderful ingenuity to explain all the phenomena of cholera. . . . Apart from all peculiarities of theory on the author's part, the present work will be found to contain a clear and complete account of what is known of cholera, and an acute and instructive criticism of the theories of its nature, which have been propounded by different writers."

From the Popular Science Review, Edited by HENRY LAWSON, M.D., Jan. 1867.

"Whatever amount of truth Dr. Chapman's hypothesis may possess, his view is worked out with a display of logical reasoning, formidable facts, and erudition, such as is seldom met with in medical essays. . . . Of the hundred and one treatises on cholera which have been published during the past year, Dr. Chapman's is at once the most interesting, the most scientific, and the most scholarly."

From the Indian Medical Gazette, Jan. 1867.

"The section criticising Dr. George Johnson's castor-oil treatment and lung-capillary theory is very ingenious."

From the Half-yearly Abstract of the Medical Sciences, vol. xlv.

"The apparent positive results obtained by the application of the ice-bag in collapse have been the promotion of a more steady reaction and the relief of cramps. One or two of the cases recorded seem to leave little doubt in these respects, and these facts command attention."

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CASES OF DIARRHŒA AND CHOLERA:

TREATED SUCCESSFULLY THROUGH THE AGENCY OF THE
NERVOUS SYSTEM, CHIEFLY BY MEANS OF THE
SPINAL ICE-BAG.

" . . . The author having proposed his method of treatment, has in the next place to determine its actual value in practice; he accordingly completes his case by bringing forward a large body of evidence to show that his method, when carried out by attendants with the minute care he has a right to enjoin upon them is, if not uniformly, at any rate, very largely successful. . . . We must say that his statements are backed by very strong evidence, used with much knowledge and skill—so much so, indeed, that they cannot be overlooked, but claim our instant attention. . . . We cannot but be pleased to think that the evidence is most strong in support of that one position in which we are most immediately interested—namely, that the ice treatment is successful. This surely is the main point, and in the face of the miserable results obtained under the use of other methods, we cannot but form a favourable estimate of the alternative treatment here proposed. . . . And although we fortunately have no experience of cholera thus treated, yet in fairness to Dr. Chapman, we ought to say that we have found the ice-bag very useful in some other disorders. For example, we have found it strikingly successful in maniacal conditions, when applied to the cervical region; in sympathetic vomiting likewise, and in some other conditions too numerous now to mention.—*Medical Times and Gazette*, Feb. 17, 1872.

"Dr. Chapman has the undoubted merit of originating a system of treatment which we believe is of great practical value. We are satisfied of the truth of his assertion, that the condition of the viscera of the thorax and abdomen can be modified to a considerable extent by the external application of heat and cold to the spine. We have ourselves observed the advantages of Dr. Chapman's method of treatment in sea-sickness. In the stages of bronchitis where the breathing is dry and tubular, Dr. Chapman's hot-water bag often causes marked relief, and the increased secretion of mucus from the bronchial tubes seems to be proved by the greater softness of the breathing which may be ascertained to follow in a few minutes by auscultation. . . . The pamphlet is in a readable form, and shows both great scientific knowledge and practical sagacity."—*Medical Press and Circular*.

"A readable and persuasive pamphlet. We should like to see Dr. Chapman's views fully tested."—*Edinburgh Medical Journal*, July, 1872.

LONDON: BAILLIÈRE, TINDALL AND COX, 20, King William Street, Strand.

Directions for Selecting a Suitable Bag in each Case.

When an ICE-BAG is wanted for any particular patient, one should be chosen which will extend from the second or third cervical to the third or fourth lumbar vertebra, or from the nape of the neck to the lower part of the "small" or hollow of the back. It is exceedingly important that the cold should not (unless in certain cases for special reasons) extend on to the base of the skull, and even more indispensable that it should not reach over any part of the sacrum.

If it be desired to apply ice to a portion only, say a third, of the spine, it is especially necessary that a bag of suitable width be used. Ice applied in one of the small-sized bags to the back of an adult would not produce an adequate effect; whereas, applied to the back of a child in one of the large-sized bags, it would probably, by its great lateral extension, exert a depressing and otherwise injurious influence.

When it is necessary, in cases of children and youths, to apply ice to a part only of the spine, a bag of suitable size for the patient in question, supposing ice were about to be applied to the whole spine, should be selected; then, if only a third of the spine, no matter which part of it, is to be acted on, the upper cell of the bag should be filled with ice, and applied where intended, the remainder of the bag being allowed to hang loosely, or folded up behind the cell which is used; if two-thirds of the spine is to be acted on, the upper two cells of the bag should be filled with ice and applied to the appropriate part, the lower cell remaining empty and dependent, or folded upwards behind the cells in use, in the same way as when only one cell is used.

In applying ice to a limited part of the adult spine, either a spine-bag of suitable size for an adult should be used in the manner just indicated, or a short bag, called the "Lumbar Ice-bag," consisting of only two cells, and designed especially for the application of ice to the lumbar region, may be conveniently adopted.

THE SPINAL WATER-BAGS, excepting the one of the smallest size, are all of one width, and are all alike intended for adults.

The length therefore of the bag which it may be desirable to employ for the application of heat (or of moderate degrees of cold) in any particular case, must of course be determined by the medical attendant of the patient.

Directions for Preparing and Applying the Spinal Ice-Bag.

Put ice (broken into pieces about the size of a nut or small walnut*) into the opening of the bag, on the side nearest to the loops, until the contents of the lowest cell reach up to the bottom of the second cell; then put ice in the middle opening until it reaches up to the bottom of the third cell; and finally, fill the top cell. Then close the bag with the clamp, *placing it on the thickened, band-like part around the mouth*,† and letting the screws be on the same side as the loops of the bag. When the clamp is properly applied, a very moderate pressure by its screws is needful to make the bag water-tight. All pressure beyond what is needful injures the bag. Care must be taken that each cell is not so filled as to cause it to become round, otherwise only a small portion of the bag will touch the back. It is also expedient that the contents of the several cells should only slightly overlap each other.

In applying the bag, place the smooth side of it in apposition with the back, the side bearing the loops being turned outwards. The bag may be kept in its position in various ways. If it is intended to be used for only a short time, or if the patient be in bed, the best plan is to lie upon it, taking care that it is exactly along the centre of the back. If the patient should wish to move about, pass the elastic band round the head, in order that it may hold the upper cell close to the back of the neck, and sustain the bag by fastening the clothes tightly outside of it; or pass a long tape through the lower loop, carrying each half of this tape over the shoulders, crossing one over the other in front of the chest, carrying them backwards round the waist, in order to clasp the bag closely into the small of the back, and then, bringing them forward, tie them in front. The bag will thus be sustained, and without allowing any of its weight to depend from the head. In this case the patient may move or walk about without any discomfort while wearing the bag.

As ice contains a considerable amount of air, this air, as the ice

* This is most easily done by means of an "Ice-breaker," supplied by iron-mongers, and consisting of a tapered piece of steel, sharp-pointed, and fixed in a handle. The ice, when about to be broken into small fragments, should be placed in a wooden bowl, which both prevents them from being scattered, and the ice breaker from being blunted.

† These words are printed in italics in the hope of emphasizing the injunction they contain as strongly as possible. Many persons apply the clamp beneath the band, where, as there are two layers of india-rubber less than there are above, it is necessary to screw it more tightly than is needful when the clamp is applied on the band, in order to make the bag water-tight. By thus wrongly applying the clamp, its undue pressure is liable to cut the bag, and so destroy it.

melts, accumulates at the top of the bag, and being a bad conductor of heat, prevents the still unmelted ice which it surrounds from exerting its intended influence : it is therefore necessary to unscrew the clamp occasionally, in order to let the air escape, and, if the bag is to be worn for a considerable time, to replace the air by a little fresh ice.

Ice may usually be procured of any fishmonger ; but patients who may need to use the spinal ice-bag for a considerable time will find it best to buy a quarter or half cwt. of ice at a time. The best ice may be had at from 5s. to 8s. per cwt., and may be kept in a refrigerator or common box. A refrigerator or ice-safe not only excludes the outer air from the ice, and thus retards its melting, but it is at the same time a domestic luxury.

Ice can, however, be so kept as to retard its melting without the aid of a refrigerator. For this purpose it should be placed in a wooden box having holes in the bottom, and so supported as to permit the water to drain away from it and the ice should be surrounded with an abundance of sawdust. Whatever plan is adopted, the more the box containing the ice is surrounded with some substance which is a bad conductor of heat—a blanket, carpet, or some straw, for example—the more slowly the ice will melt.

Directions for Applying the Spinal Water-Bag.

Fill the bag with water of the required temperature, and apply it directly to the appropriate part of the back, keeping it in its place in any way most convenient to the patient. This may be most easily done by lying upon it, or by pressing the bag between the back of a high-backed chair and the appropriate part of the spine. When the bag is applied in the dorsal or lumbar region only it may also be sustained by merely fastening the dress tightly over it. In applying the bag in the lumbar region, ladies most usually keep it, as well as the Lumbar Ice-bag, in its place in this way, and can thus freely walk about during the application.

The Spinal Water-bag is used for the application of Heat, and also of Cold of any degree above that of freezing-point, in cases where it is desirable, while influencing the sympathetic ganglia on each side of the spinal cord to affect the spinal cord itself as little as possible ; but its chief use is for the application of Heat.

For the latter purpose the temperature of the water put into the bag may vary, according to the requirements of the case in question, from 110° to 120° Fahrenheit. In the great majority of cases in which the application of heat is desirable, the water used should not be of a higher temperature than 120° ; *and the lower the temperature of the water used consistently with effecting the object for which it is applied, the better for the patient.* When it is necessary to continue the application, the water should be changed about every 30 or 45 minutes. Of course, the more the bag is shielded from the surrounding air by materials which impede the passage of heat—as woollens or a feather pillow—the longer it will keep hot.

DR. CHAPMAN'S SPINE-BAGS (PATENT),

DESIGNED FOR THE PRACTICAL APPLICATION OF THE PRINCIPLES
OF NEURO-DYNAMIC MEDICINE.

THE SPINAL ICE-BAGS vary in breadth from two to four inches and a quarter, the shortest bag being the narrowest, and the longest the broadest. Their lengths are as follows:—



8 inch	}	suitable for children.
10 "		
12 "		
14 "	}	suitable for youth of both sexes.
16 "		
18 "		
20 "	}	suitable for women.
22 "		
24 "		
26 "	}	suitable for men.
28 "		

Lumbar Ice-Bag, 10 inches
long.

THE SPINAL WATER-BAGS are
in respect to size as fol-
lows:

6 inch	{	suitable for youth of both sexes.
8 "		
10 "	{	suitable for adults of both sexes.
12 "		
14 "		

SPINAL ICE-BAG.

SPINAL WATER-BAG.

THE SPINAL ICE-BAG is divided into cells, generally three. By this arrangement the ice, being prevented from falling from the upper parts to the bottom of the bag, can be kept in apposition with the whole or any special part of the spine, even though the patient should be upright, or should walk about. The mouths of all the cells are so effectively closed by means of a clamp that no water can escape even though the whole of the ice be melted.

The Bags are sold by the following Agents:—

LONDON: C. MACINTOSH & CO., the Manufacturers, 83, Cannon Street, E.C.

S. MAW, SON, & THOMPSON, 11, Aldersgate Street, E.C.

JOHN G. GOULD, 198, Oxford Street, W.

GLASGOW: THOMAS CHAPMAN, 56, Buchanan Street.

PHILADELPHIA: J. MARDON WILSON, JUN.

CALCUTTA: WYMAN & COMPANY, 1, Hare Street.

AND MAY BE HAD BY ORDER OF ALL DRUGGISTS.

SEA-SICKNESS

PREVENTED OR CURED

BY MEANS OF

DR. CHAPMAN'S SPINAL ICE-BAG:

Directions how to use it.

PERSONS intending to make use of the Spinal Ice Bag as a remedy for sea-sickness must carefully comply with Dr. Chapman's Instructions given in his work, entitled, "Sea-sickness, and how to prevent it" [see page 13 of this pamphlet]. A summary of the most important parts of those instructions is here presented.

The Spinal Ice-Bag must in each case be of a size exactly suitable to the patient—in respect both to length and breadth: it must be just long enough to extend from the nape of the neck to the lower part of the hollow of the back, or to that part of the spine on a level with the tops of the hip-bones; when a bag of suitable length is selected it is of suitable breadth, because the breadth of each bag is duly proportioned to its length. (See page 20.)

Each of the three compartments of the bag must have ice put into it in the manner directed at page 21.

The bag must be applied along the whole length of the spine, extending from the upper part of the neck to the lower part of the hollow of the back, or from a point on a level with the third cervical vertebra to a point on a level with the third lumbar vertebra. In all severe cases the bag should be placed next to the skin, but in many cases it suffices to place it outside the shirt or chemise. In no case must flannel intervene.

In order to apply the Spinal Ice-Bag next the skin it suffices in the case of men to unbutton the waistcoat and shirt-collar and to loosen the braces, as well as the neckerchief, so as to permit the bag to be easily slipped down from above between the shirt and the spine to its proper place—where it is maintained without difficulty by the pressure of the clothes rebuttoned over it. The shirt-collar, unless unusually wide, cannot be rebuttoned, but the neckerchief, being retied, keeps it close, so that the fact that it is not buttoned is scarcely, or not at all, observable. Women about to apply the Spinal Ice-Bag must of course thoroughly loosen the stays as well as the other parts of the dress surrounding the chest, and when the bag is slipped down between the clothes and the spine care must be taken that the bottom of the bag passes just between the waist-bands sustaining the skirts and the lower part of the spine. The bag is then rightly placed, and is easily maintained in its position by tightening the clothes around it. The patient with the bag thus adjusted may sit up or walk about the deck without any discomfort. He, or she, will probably feel, however, that the agreeable sensation induced by the ice would be increased were the Spinal Ice-Bag pressed more thoroughly against the spine than it is by the dress even though it be felt to be quite tight. In such cases if the patient will throw a rug or shawl across the shoulders, and will grasp it firmly with each hand, he or she may thus press the bag quite closely to the spine while walking about. The same object may be easily effected, if the patient sits down, by pressing the bag against the back by means of the back of a chair, or of any other support leaned against. In very severe cases the patient should lie on the Ice-Bag, care being taken that it presses as thoroughly against the lower as against the upper part of the spine.

So long as the liability to sickness continues the Spinal Ice-Bag must be applied as uninterruptedly as possible. Each bag of ice, if the ice be good, lasts, when applied, about two hours (more or less according to the temperature of the atmosphere), and as soon as the ice in the bag is *wholly* melted it should be refilled with ice, and should be at once re-applied in cases in which the tendency to sickness quickly recurs.

Persons crossing the British Channel between Dover and Calais, or between Folkestone and Boulogne, need, as a rule, only one bag of ice for the passage; and if, immediately before leaving London, Paris, or Brussels, to cross the Channel, they have the bag filled with good ice and then carefully surrounded with several folds of a good woollen rug, and if they proceed directly from the railway to the boat, the ice in the bag will have melted very slightly meanwhile, and will still suffice to prevent sea-sickness during the passage.

Persons peculiarly liable to sea-sickness should always take care to have the Spinal Ice-Bag properly applied *before* the vessel in which they embark leaves the harbour. Some persons prudently apply the bag while they are still in the railway carriage, just before the train arrives at the port of embarkation.